

*AC*  
Claim 39, line 2, delete "17" and substitute --47--.

Claim 26 (Amended) A compound according to claim [1]  
~~which is N-methyl-1-nojirimycin, n-ethyl-1-~~  
nojirimycin, N-n-butyl-1-nojirimycin, N-benzyl-1-  
~~nojirimycin, N-allyl-1-nojirimycin, N-( $\beta$ -methoxy-ethyl)-~~  
~~1-nojirimycin, [N-methyl-1-desoxy-nojirimycin, N-~~  
~~ethyl-1-desoxynojirimycin, N-n-propyl-1-desoxy-nojirimycin,~~  
~~N-n-butyl-1-desoxy-nojirimycin,] N-n-pentyl-1-desoxy-~~  
~~nojirimycin, N-n-hexyl-1-desoxynojirimycin, [N-iso-~~  
~~butyl-1-desoxy-nojirimycin,] N-benzyl-1-desoxynojirimycin,~~  
~~N-allyl-1-desoxy-[nojirimycin] nojirimycin, N-( $\beta$ -methoxy-~~  
~~ethyl)-1-desoxynojirimycin, N-methyl-1-desoxy-~~  
~~nojirimycin-1-sulphonic acid, N-octyl-1-desoxynojirimycin,~~  
~~N-nonyl-1-desoxy-nojirimycin, 1-tosylaminomethyl-1-~~  
~~desoxy nojirimycin, N-methyl-1-tosylaminomethyl-1-~~  
~~desoxynojirimycin, N-nonyl-1-acetylaminomethyl-1-~~  
~~desoxynojirimycin, N-methyl-benzoylaminomethyl-1-~~  
~~desoxynojirimycin, N-propargyl-1-<sup>deoxy</sup>~~desoxy~~nojirimycin or N-~~  
~~(2-methylmercaptoethyl)-1-desoxy-nojirimycin.~~

*f' d*  
*R 3-4-X*  
*R 3-4-X*

*AC*  
Claim 11, line 1, delete "1" and substitute --47--;  
line 1, delete "Heptyl" and substitute --Heptyl--.

B

Claim ~~24~~ <sup>18</sup> Twice (Amended) A pharmaceutical composition for the treatment of diabetes, hyperlipaemia or adiposity containing as an active ingredient an effective amount for the treatment of diabetes, hyperlipaemia or adiposity of a compound according to claim ~~47~~ [1] in admixture with a solid or liquefied gaseous diluent or in admixture with a liquid diluent other than a solvent of a molecular weight less than 200 except in the presence of a surface-active agent.

f2

B

Claim ~~25~~ <sup>19</sup> Twice (Amended) A pharmaceutical composition for the treatment of diabetes, hyperlipaemia or adiposity containing as an active ingredient an effective amount of a compound according to claim [1] ~~47~~ in the form of a sterile or physiologically isotonic aqueous solution.

H

f3

Claim ~~29~~ <sup>20</sup> Twice (Amended) A method of combating adiposity, diabetes and/or [hypereipaemia] hyperlipaemia in warm-blooded animals which comprises administering to the said animal an effective amount for the treatment of diabetes, hyperlipaemia or adiposity of an active compound according to claim [1] ~~47~~ either alone or in admixture with a diluent or in the form of a medicament.

*14*  
Claim ~~27~~<sup>21</sup> *Twice* (Amended) A medicament in dosage unit form  
for the treatment of diabetes, hyperlipaemia or adiposity  
comprising an effective amount for the treatment of  
diabetes, hyperlipaemia or adiposity of a compound according  
to claim [1] ~~17~~ and an inert pharmaceutical carrier.

*15*  
Claim ~~24~~<sup>23</sup> *Twice* (Amended) A pharmaceutical composition for  
the treatment of diabetes, hyperlipaemia or adiposity  
containing as an active ingredient an effective amount for  
the treatment of diabetes, hyperlipaemia or adiposity of a  
compound according to claim [17] ~~16~~ <sup>17</sup> in admixture with a  
solid or liquefied gaseous diluent or in admixture with a  
liquid diluent other than a solvent of a molecular weight  
less than 200 except in the presence of a surface-active  
agent.

*16*  
Claim ~~25~~<sup>24</sup> *Twice* (Amended) A pharmaceutical composition for  
the treatment of diabetes, hyperlipaemia or adiposity  
containing as an active ingredient an effective amount for  
the treatment of diabetes, hyperlipaemia or adiposity of a  
compound according to claim [17] ~~16~~ <sup>17</sup> in the form of a sterile  
or physiologically isotonic aqueous solution.

*17*  
Claim ~~26~~<sup>25</sup> *Twice* (Amended) A medicament in dosage unit form  
comprising an effective amount for the treatment of  
diabetes, hyperlipaemia or adiposity of a compound according  
to claim [17] ~~16~~ <sup>17</sup> and an inert pharmaceutical carrier.

*B*

Claim 38 <sup>31</sup> ~~Twice~~ (Amended) A method of combating adiposity,

diabetes and/or hyperlipaemia in warm-blooded animals which comprises administering to the animals an effective amount for the treatment of diabetes, hyperlipaemia or adiposity of an active compound according to claim [17] <sup>17</sup> either alone or in admixture with a diluent or in the form of a medicament.

*J6*

Claim 40 (Amended) A pharmaceutical composition for

the treatment of diabetes, hyperlipaemia or adiposity containing as an active ingredient an effective amount for the treatment of diabetes, hyperlipaemia or adiposity of a compound according to claim 18 in admixture with a solid or liquefied gaseous diluent or in admixture with a liquid diluent other than a solvent of a molecular weight less than 200 except in the presence of a surface-active agent.

Claim 41 (Amended) A pharmaceutical composition for

the treatment of diabetes, hyperlipaemia or adiposity containing as an active ingredient an effective amount for the treatment of diabetes, hyperlipaemia or adiposity of a compound according to claim 18 in the form of a sterile or physiologically isotonic aqueous solution.

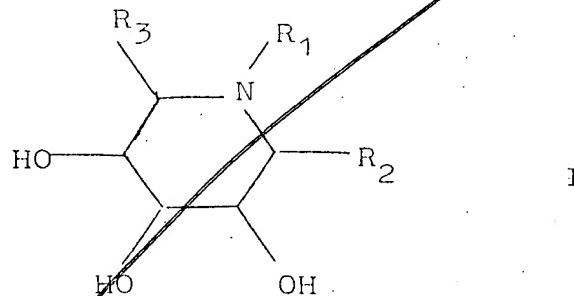
*J7*

*J7*  
*contd*

Claim 42 (Amended) A medicament for the treatment of diabetes, hyperlipaemia or adiposity comprising an effective amount for the treatment of diabetes, hyperlipaemia or adiposity of a compound of claim 18 in the form of tablets, pills, dragees, capsules, ampoules, or suppositories.

Claim 43 (Amended) A method of combating adiposity, diabetes and/or hyperlipaemia in warm-blooded animals which comprises administering to the animals an effective amount for the treatment of diabetes, hyperlipaemia or adiposity of an active compound according to claim 18 either alone or in admixture with a diluent or in the form of a medicament.

Claim 47 (Amended) A compound of the formula



*J8*  
*V.W.S.*

in which

R<sub>1</sub> is [or] C<sub>1</sub>-C<sub>5</sub>-C<sub>30</sub> alkyl, C<sub>2</sub>-C<sub>18</sub> alkenyl, C<sub>2</sub>-C<sub>18</sub> alkinyl, C<sub>3</sub>-C<sub>8</sub> cycloalkyl, C<sub>3</sub>-C<sub>8</sub> cycloalkenyl, C<sub>3</sub>-C<sub>8</sub>-cycloalkinyl [or] phenyl

or substituted C<sub>1</sub>-C<sub>4</sub>-alkyl

(a),

said alkyl, cycloalkyl, cycloalkenyl and cycloalkinyl being unsubstituted or substituted by hydroxy, C<sub>1</sub>-C<sub>4</sub>-alkoxy, acyloxy, amino, mono-C<sub>1</sub>-C<sub>4</sub> alkylamino, di-C<sub>1</sub>-C<sub>4</sub> alkylamino, acylamino, mercapto, C<sub>1</sub>-C<sub>4</sub> alkylthio, halogen, C<sub>1</sub>-C<sub>4</sub> alkylcarbonyl, carboxyl nitro, cyano, formyl, sulfo, a heterocyclic radical derived from a hexose or pentose, attached to the alkyl moiety directly via a ring atom or via an -O-, -S- or -NH-bridge (naphthyl or phenyl (b); said acyl being derived from an aliphatic carboxylic acid having from 1 to 7 C-atoms, a phenyl carboxylic acid, unsubstituted or substituted by carboxy, hydroxy, halogen, C<sub>1</sub> to C<sub>4</sub> alkyl, C<sub>1</sub> to C<sub>4</sub> alkoxy, nitro or amino, or a 5- or 6-membered heterocyclic carboxylic acid containing from 1 to 3 hetero-atoms each of which is N, O or S, unsubstituted or substituted by C<sub>1</sub> to C<sub>4</sub> alkyl, chlorine, bromine or amino;

said phenyl (a) being unsubstituted or substituted by C<sub>1</sub> to C<sub>10</sub> alkyl, C<sub>1</sub> to C<sub>10</sub> chloroalkyl, C<sub>1</sub> to C<sub>10</sub> nitroalkyl, C<sub>1</sub> to C<sub>10</sub> cyanoalkyl, C<sub>1</sub> to C<sub>10</sub> alkenyl, hydroxyl, C<sub>1</sub> to C<sub>4</sub> alkoxy, amino, mono-C<sub>1</sub> to C<sub>4</sub> alkylamino, di-C<sub>1</sub>-C<sub>4</sub> alkylamino, mercapto, C<sub>1</sub>-C<sub>4</sub> alkylthio, carboxyl, C<sub>1</sub>-C<sub>4</sub> carbalkoxy, sulfo, C<sub>1</sub>-C<sub>4</sub> alkylsulfonyl, phenylsulfonyl, aminosulfonyl, C<sub>1</sub>-C<sub>4</sub> alkylaminosulfonyl, di-C<sub>1</sub>-C<sub>4</sub> alkylaminosulfonyl, nitro, cyano, formyl, C<sub>1</sub>-C<sub>4</sub> alkylcarbonyl-amino, C<sub>1</sub>-C<sub>4</sub> alkylcarbonyl, benzoyl, benzylcarbonyl or

[phenylacylcarbonyl] phenylethylcarbonyl;

said substituted C<sub>1</sub>-C<sub>4</sub> alkyl being substituted by hydroxy,

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J8  
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C<sub>1</sub>-C<sub>4</sub>-alkoxy, acyloxy, amino, mono-C<sub>1</sub>-C<sub>4</sub> alkylamino, di-C<sub>1</sub>-C<sub>4</sub> alkylamino, acylamino, mercapto, C<sub>1</sub>-C<sub>4</sub> alkylthio, halogen, C<sub>1</sub>-C<sub>4</sub> alkylcarbonyl, carboxyl, nitro, cyano, formyl, sulfo, a heterocyclic radical derived from a hexose or pentose, attached to the alkyl moiety directly via a ring atom or via an -O-, -S- or -NH-bridge, naphthyl or phenyl (a); said acyl being derived from an aliphatic carboxylic acid having from 1 to 7 C-atoms, a phenyl carboxylic acid, unsubstituted or substituted by carboxy, hydroxy, halogen, C<sub>1</sub> to C<sub>4</sub> alkyl, C<sub>1</sub> to C<sub>4</sub> alkoxy, nitro or amino, or a 5- or 6-membered heterocyclic carboxylic acid containing from 1 to 3 hetero-atoms each of which is N, O or S, unsubstituted or substituted by C<sub>1</sub> to C<sub>4</sub> alkyl, chlorine, bromine or amino; said phenyl (a) being unsubstituted or substituted by C<sub>1</sub> to C<sub>10</sub> alkyl, C<sub>1</sub> to C<sub>10</sub> chloroalkyl, C<sub>1</sub> to C<sub>10</sub> nitroalkyl, C<sub>1</sub> to C<sub>10</sub> cyanoalkyl, C<sub>1</sub> to C<sub>10</sub> alkenyl, hydroxyl, C<sub>1</sub> to C<sub>4</sub> alkoxy, amino, mono-C<sub>1</sub> to C<sub>4</sub> alkylamino, di-C<sub>1</sub>-C<sub>4</sub> alkylamino, mercapto, C<sub>1</sub>-C<sub>4</sub> alkylthio, carboxyl, C<sub>1</sub>-C<sub>4</sub> carbalkoxy, sulfo, C<sub>1</sub>-C<sub>4</sub> alkylsulfonyl, phenylsulfonyl, aminosulfonyl, C<sub>1</sub>-C<sub>4</sub> alkylaminosulfonyl, di-C<sub>1</sub>-C<sub>4</sub> alkylaminosulfonyl, nitro, cyano, formyl, C<sub>1</sub>-C<sub>4</sub> alkylcarbonylamino, C<sub>1</sub>-C<sub>4</sub> alkylcarbonyl, benzoyl, benzylcarbonyl or [phenylacetylcarbonyl] phenylethylcarbonyl; said naphthyl and naphthyl and phenyl (b) being unsubstituted or substituted by hydroxyl, amino, C<sub>1</sub>-C<sub>4</sub> alkylamino, di-

$C_1-C_4$  alkylamino,  $C_1-C_4$  alkoxy, nitro, cyano, carboxy,  $C_1-C_4$  alkoxy carbonyl,  $C_1-C_6$  alkyl, halogen,  $C_1-C_4$  alkylthio, mercapto,  $C_1-C_4$  alkylsulfonyl, sulfur, aminosulfonyl or  $C_1-C_4$  alkylaminosulfonyl

$R_2$  is -H, -OH,  $-SO_3^H$ , -CN,  $-CH_2NH_2$ ,  $CH_2NH-[ ]$  ( $C_1$  to  $C_{14}$ ) alkyl[],

$-CH_2NH-C-[ ]$  ( $C_1$  to  $C_{14}$ ) alkyl[]  $-CH_2-NH-SO_2[ ]$  ( $C_1$  to  $C_{14}$ ) alkyl

$-CH_2-NH-SO_2$ -phenyl,  $-CH_2-NH-C$ -phenyl,  $-CH_2-NH-C-NH[ ]$  ( $C_1$  to  $C_{14}$ )

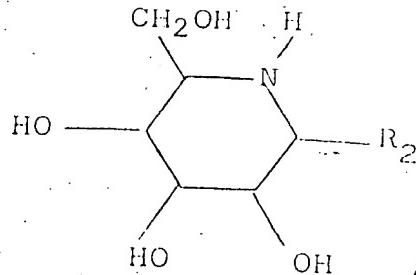
$alkyl[ ]$ ,  $-CH_2-NH-C-NH$ -phenyl,  $-CH_2-NH-C-NH[ ]$  ( $C_1$  to  $C_{14}$ ) alkyl[],

$-CH_2-NH-C-NH$ -phenyl,  $-CH_2-NH-C-O-[ ]$  ( $C_1$  to  $C_{14}$ ) alkyl[] or

$-CH_2-NH-C-O$ -phenyl wherein phenyl is unsubstituted or substituted

by methyl, ethyl, methoxy, ethyl, methoxy, chlorine, bromine or nitro,  
 $R_3$  is -H,  $CH_3$ ,  $-CH_2OH$ ,  $-CH_2NH_2$ ,  $NHR'-CH_2-$ ,  $NR'R''-CH_2-$ ,  $R'CONH-CH$   
 $R'CO-NR''CH_2-$ ,  $R'O-CH_2$ ,  $R'COOCH_2-$ ,  $R'SO_2NHCH_2-$ ,  $R'SO_2-NR''CH_2-$ ,  
 $R'NH-CO-NH-CH_2-$ ,  $R'NHCS-NH-CH_2-$ ,  $R'O-CO-NH-CH_2-$ , wherein  $R'$  and  $R''$   
are the same or different and each has the meaning hydrogen or any of  
the meanings given above for  $R_1$ .

Claim 48 Amended) A compound of the formula



wherein

$\text{R}_2$  is  $-\text{CH}_2-$ ,  $-\text{CH}_2\text{NH}_2$ ,  $-\text{CH}_2\text{NH}-[\text{C}_1 \text{ to } \text{C}_{14}-\text{O}]$ ,

$-\text{CH}_2\text{NH}-\underset{\text{O}}{\text{C}}-[\text{C}_1 \text{ to } \text{C}_{14}-\text{alkyl}]$ ,  $-\text{CH}_2\text{NH}-\text{SO}_2-[\text{C}_1 \text{ to } \text{C}_{14}]-\text{alkyl}$

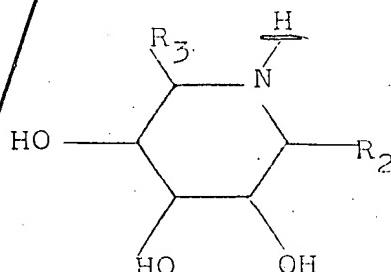
$-\text{CH}_2\text{NH}-\text{SO}_2\text{-phenyl}$ ,  $-\text{CH}_2\text{NH}-\underset{\text{O}}{\text{C}}\text{-phenyl}$ ,  $-\text{CH}_2\text{NH}-\underset{\text{O}}{\text{C}}\text{-NH}[\text{C}_1 \text{ to } \text{C}_{14}-$

$\text{alkyl}]$ ,  $-\text{CH}_2\text{NH}-\underset{\text{O}}{\text{C}}\text{-NH-phenyl}$ ,  $-\text{CH}_2\text{NH}-\underset{\text{O}}{\text{C}}\text{-NH}[\text{C}_1 \text{ to } \text{C}_{14}-\text{alkyl}]$ ,  $-\text{CH}_2\text{NH}-\underset{\text{S}}{\text{C}}\text{-NH-phenyl}$ ,

$-\text{CH}_2\text{NH}-\underset{\text{O}}{\text{C}}\text{-O-}[\text{C}_1 \text{ to } \text{C}_{14}-\text{alkyl}]$  or  $-\text{CH}_2\text{NH}-\underset{\text{O}}{\text{C}}\text{-O-phenyl}$

wherein phenyl is unsubstituted or substituted by methyl, ethyl, methoxy, [ethyl, methoxy], chlorine, bromine, or nitro.

Claim 49 (Amended) A compound of the formula



wherein

R<sub>2</sub> is H, -SO<sub>3</sub>H, -CN, -CH<sub>2</sub>NH<sub>2</sub>, -CH<sub>2</sub>NH-[ ](C<sub>1</sub> to C<sub>14</sub>-alkyl[ ]),  
-CH<sub>2</sub>NH-C-[ ](C<sub>1</sub> to C<sub>14</sub>-alkyl[ ]), -CH<sub>2</sub>-NH-SO<sub>2</sub>-[ ](C<sub>1</sub> to C<sub>14</sub>[ ])-alkyl  
CH<sub>2</sub>-NH-SO<sub>2</sub>-phenyl, -CH<sub>2</sub>-NH-C-phenyl, -CH<sub>2</sub>-NH-C-NH-[ ](C<sub>1</sub> to C<sub>14</sub>-  
alkyl), -CH<sub>2</sub>-NH-C-NH-phenyl, -CH<sub>2</sub>-NH-C-NH-[ ](C<sub>1</sub> to C<sub>14</sub>-alkyl), -CH<sub>2</sub>-  
NH-C-NH-phenyl, -CH<sub>2</sub>-NH-C-O-[ ](C<sub>1</sub> to C<sub>14</sub>-alkyl[ ]) or -CH<sub>2</sub>-NH-C-O-phenyl  
S 0 0

wherein phenyl is unsubstituted or substituted by methyl, [ethyl,  
methoxy], 'ethyl, methoxy, chlorine, bromine or nitro and R<sub>3</sub> is  
CH<sub>2</sub>-NH<sub>2</sub>, -CH<sub>2</sub>-NHR', -CH<sub>2</sub>-NR'R'', -CH<sub>2</sub>-NHCOR', -CH<sub>2</sub>-NR''-COR',  
-CH<sub>2</sub>OR', -CH<sub>2</sub>-OCOR', -CH<sub>2</sub>-NHSO<sub>2</sub>R', -CH<sub>2</sub>-NR''-SO<sub>2</sub>R', -CH<sub>2</sub>-NHCONH<sub>2</sub>,  
-CH<sub>2</sub>-NHCONHR', -CH<sub>2</sub>-NHCSNH<sub>2</sub>, -CH<sub>2</sub>-NHCSNHR', -CH<sub>2</sub>-NH-COOR'  
wherein R' and r'' are the same or different and each is  
C<sub>1</sub>-C<sub>30</sub> alkyl, C<sub>2</sub>-C<sub>18</sub> alkenyl, C<sub>2</sub>-C<sub>18</sub> alkinyl, C<sub>3</sub>-C<sub>8</sub> cyclo-  
alkyl, C<sub>3</sub>-C<sub>8</sub> cycloalkenyl, C<sub>3</sub>-C<sub>8</sub>-cycloalkinyl or phenyl (a),  
said alkyl, cycloalkyl, cycloalkenyl and cycloalkinyl being unsubstituted  
or substituted by hydroxy, C<sub>1</sub>-C<sub>4</sub>-alkoxy, acyloxy, amino, mono-  
C<sub>1</sub>-C<sub>4</sub>alkylamino, di-C<sub>1</sub>-C<sub>4</sub> alkylamino, acylamino, mercapto, C<sub>1</sub>-C<sub>4</sub>  
alkylthio, halogen, C<sub>1</sub>-C<sub>4</sub> alkylcarbonyl, carboxyl, nitro, cyano, formyl,  
sulfo, a heterocyclic radical derived from a hexose or pentose,  
attached to the alkyl moiety directly via a ring atom or via an -O-,  
-S- or -NH-bridge, naphthyl or phenyl (b) said acyl being derived  
from an aliphatic carboxylic acid having from 1 to 7 C-atoms,  
a phenyl carboxylic acid, unsubstituted or substituted by carboxy,

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hydroxy, halogen, C<sub>1</sub> to C<sub>4</sub> alkyl, C<sub>1</sub> to C<sub>4</sub> alkoxy, nitro or amino, or a 5- or 6-membered heterocyclic carboxylic acid containing from 1 to 3 hetero-atoms each of which is N, O or S, unsubstituted or substituted by C<sub>1</sub> to C<sub>4</sub> alkyl, chlorine, bromine or amino;

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said phenyl (a) being unsubstituted or substituted by C<sub>1</sub> to C<sub>10</sub> alkyl, C<sub>1</sub> to C<sub>10</sub> chloroalkyl, C<sub>1</sub> to C<sub>10</sub> nitroalkyl, C<sub>1</sub> to C<sub>10</sub> cyanoalkyl, C<sub>1</sub> to C<sub>10</sub> alkenyl, hydroxyl, C<sub>1</sub> to C<sub>4</sub> alkoxy, amino mono-C<sub>1</sub> to C<sub>4</sub> alkylamino, di-C<sub>1</sub>-C<sub>4</sub> alkylamino, mercapto, C<sub>1</sub>-C<sub>4</sub> alkylthio, carboxyl, C<sub>1</sub>-C<sub>4</sub>-carbalkoxy, sulfo, C<sub>1</sub>-C<sub>4</sub> alkylsulfonyl, phenylsulfonyl, aminosulfonyl, C<sub>1</sub>-C<sub>4</sub> alkylaminosulfonyl, di-C<sub>1</sub>-C<sub>4</sub> alkylaminosulfonyl, nitro, cyano, formyl, C<sub>1</sub>-C<sub>4</sub> alkylcarbonylamino, C<sub>1</sub>-C<sub>4</sub> alkylcarbonyl, benzoyl, benzylcarbonyl or phenylacetylcarbonyl;

said naphthyl and phenyl (b) unsubstituted or substituted by hydroxyl, amino, C<sub>1</sub>-C<sub>4</sub> alkylamino, di-C<sub>1</sub>-C<sub>4</sub> alkylamino, C<sub>1</sub>-C<sub>4</sub> alkoxy, nitro, cyano, carboxy, C<sub>1</sub>-C<sub>4</sub> alkoxy carbonyl, C<sub>1</sub>-C<sub>6</sub> alkyl, halogen, C<sub>1</sub>-C<sub>4</sub> alkylthio, mercapto, C<sub>1</sub>-C<sub>4</sub> alkylsulfonyl, sulfur, aminosulfonyl or C<sub>1</sub>-C<sub>4</sub> alkylaminosulfonyl.